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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/663,427	09/16/2003	Daniel R. Marshall	10002305-4 H303.190.103	1562

7590

07/25/2005

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER

NATNITHITHADHA, NAVIN

ART UNIT	PAPER NUMBER
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3736

DATE MAILED: 07/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/663,427

Applicant(s)

MARSHALL, DANIEL R.

Examiner

Navin Natnithadha

Art Unit

3736

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 February 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 23-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 23-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 09162003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Claim 37 has been amended. Claims 1-22 have been cancelled. Claims 38-42 have been added. Claims 23-42 are pending.

Specification

2. The disclosure is objected to because of the following informalities:

On page 1 of 2 in the letter titled "Request For A Continuing Application Under 37 CFR 1.53(b) filed 16 September 2003, the Applicant attempted to insert a "Cross Reference To Related Application(s)" section after the title of the Specification to state the following in regards to the priority of the current application:

"This is a divisional of copending application number 09/710,161 filed on November 8, 200, which is hereby incorporated by reference herein."

However, this is not a proper amendment for inserting the priority information of the current application. In addition, the Specification contains a "Cross Reference To Related Application(s)" section on page 1, lines 5-9. Thus, the Specification would contain two "Cross Reference To Related Application(s)" sections.

An amendment is needed to the initial "Cross Reference To Related Application(s)" section on page 1, lines 5-9 of the Specification in order to properly indicate priority to the divisional application.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 38 and 40 are rejected under 35 U.S.C. 102(e) as being anticipated by Kilcoyne et al, US 6,285,897 B1.

Claims 38 and 40: Kilcoyne teaches a method of recording data (physiological data) internally within a human body (within a body lumen of a person) (see col. 3, lines 2-10) comprising: placing (implanting) a capsule 18 (monitor) within a digestive track (esophagus or other body lumens or cavities) of a human body, the capsule 18 including a sensor 110 (transducer) and a storage device 116 (memory chip or microprocessor including temporary storage or memory of data) (see col. 4, lines 61-63, and col. 6, lines 20-26); sensing a biological condition (gastroesophageal reflux, GERD, or intrasophageal) within the human body with the sensor 110. In addition, Kilcoyne teaches a microprocessor 116 and computer software program for performing one or more logical operations (functions) using the sensed biological condition (physiological data), selectively (temporarily) recording the sensed biological condition to the storage device 116 based upon the logical operations, and accessing programmable logic from

Art Unit: 3736

the storage device (microprocessor performing one or more functions) (see col. 3, lines 28-31, and col. 6, lines 18-44). The Applicant's Specification states the following in regards to "atomic resolution storage device memory module":

"The term 'atomic resolution storage device' memory as used herein is defined as a non-volatile memory storage device capable of storing a large volume of data, such as megabytes to gigabytes of data points..."

Thus, Kilcoyne's microprocessor including a memory chip is an example of an "atomic resolution storage device memory module".

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 23-27, 29-34, 36, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kilcoyne et al, US 6,285,897 B1, in view of Iddan et al, US 5,604,531 A.

Claim 23: Kilcoyne teaches a method of recording data (physiological data) internally within a human body (within a body lumen of a person) (see col. 3, lines 2-10) comprising: sensing a predetermined type of biological condition (gastroesophageal reflux, GERD, or intrasophageal) within the digestive tract (esophagus or other body lumens or cavities) with a sensor 110 (transducer) disposed within a capsule 18 (monitor) (see col. 4, lines 9-14, and col. 5, lines 14-30); and recording the sensed

Art Unit: 3736

biological condition as data in memory module 116 (memory chip or microprocessor including temporary storage or memory of data) within the capsule 18 while the capsule 18 is in the digestive tract (see col. 4, lines 61-63, and col. 6, lines 20-26). The Applicant's Specification states the following in regards to "atomic resolution storage device memory module":

"The term 'atomic resolution storage device' memory as used herein is defined as a non-volatile memory storage device capable of storing a large volume of data, such as megabytes to gigabytes of data points..."

Thus, Kilcoyne's microprocessor including a memory chip is an example of an "atomic resolution storage device memory module". Kilcoyne teaches implanting an inert capsule (monitor 18) within the digestive tract. Kilcoyne does not explicitly teach "ingesting", or "swallowing", the inert capsule. However, Iddan teaches ingesting an inert capsule (swallowable capsule) within a digestive tract (digestive system) of a human body and sensing physiological parameters (see col. 3, lines 3-17 and 38-40). It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Kilcoyne's method to include the step of "ingesting" or "swallowing" the monitor 18 in order to have the monitor move easily through the digestive system (see Iddan, col. 1, lines 35-40).

Claims 24 and 25: Kilcoyne teaches retrieving the sensed data from memory module 116 when the capsule 18 is outside of the human body, and capturing the capsule 18 after passage of the capsule 18 through the digestive tract (see col. 4, line 63 to col. 5, line 1).

Art Unit: 3736

Claim 26: Kilcoyne teaches transmitting the data from the capsule 18 to a location outside of the human body while the capsule 18 is within the human body (see col. 4, lines 50-54).

Claim 27: Kilcoyne does not teach the subject matter as claimed. However, Iddan teaches obtaining an image (image or video data) of a predetermined body location (see col. 3, lines 12-22). It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Kilcoyne's method to include a step of obtaining an image or video of a predetermined body location within the digestive tract in order to provide autonomous video endoscopy while sensing physiological parameters (see Iddan, col. 1, lines 50-54).

Claims 29-33: Kilcoyne teaches exposing a chemical sensor array 110 (pH sensor) on the surface of the capsule to sense one or more chemical conditions (pH level) in the digestive tract, sensing at least one of a relative amount (pH) and an absolute amount of at least one or more digestive tract constituents (measuring one or more of the other physiological parameters such as ion levels and solute concentrations), sensing a pH of the digestive tract constituents, exposing an electrically based sensor in the capsule to sense biologic conditions, sensing a temperature within the digestive tract (see col. 5, lines 15-57).

Claim 34: Kilcoyne teaches performing the sensing step at a predetermined body location (positioning and sensing within the esophagus) within the digestive tract that corresponds to a known location for the predetermined biologic condition (see col. 4, lines 18-21).

Art Unit: 3736

Claim 36: Kilcoyne teaches recording sensed data continuously (in real time) within the digestive tract (see col. 4, lines 50-52).

Claim 37: Kilcoyne teaches initiating and maintaining recording of the sensed data when the sensed data reaches a predetermined value of a predetermined biologic condition (initiating and recording the physiological parameter data at predetermined intervals needed to establish the diagnosis of GERD) (see col. 4, lines 50-58, and col. 5, lines 5-13).

5. Claims 28 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kilcoyne et al, US 6,285,897 B1, in view of Iddan et al, US 5,604,531 A, as applied to claims 24 and 34 above, and further in view of DeMarco, US 5,353,807 A.

Claims 28 and 35: Kilcoyne in view of Iddan does not teach the subject matter as claimed. However, DeMarco teaches method for using a magnetically guidable intubation device, comprising: arranging a magnetic member in the capsule 56 (self contained magnetically guidable member) prior to the ingesting (swallowing) (see col. 12, line 65 to col. 13, line 5, and col. 13, lines 20-34); arranging a magnet positioner 32 (external magnetic field applying means) outside the body (see col. 14, lines 16-20); magnetically manipulating the relative position and orientation of the capsule 56 within the digestive tract (intestine) by using the magnet positioner 32 to move the magnetic member in the capsule 56 (see col. 14, lines 9-41); and identifying the passage (position or location) of the capsule 56 at a predetermined location within the digestive tract using at least one of a radiographic technique (x-ray) and an ultrasonic technique (ultrasound

Art Unit: 3736

device) (see col. 14, lines 27-30). It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Kilcoyne to magnetically guide monitor 18 and identify its location using x-ray or ultrasound techniques in order to provide a device which can be effectively magnetically guided within the interior of a body to perform a diagnostic and therapeutic medical procedure which is easy to use and can be accurately positioned (see col. 2, lines 19-32).

6. Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kilcoyne et al, US 6,285,897 B1, as applied to claim 38 above, and further in view of Iddan et al, US 5,604,531 A.

Claim 39: Kilcoyne does not teach the subject matter as claimed. However, Iddan teaches receiving video (video data) via a video receiver 24 (camera system) (see col. 3, lines 12-22 and 27-37). It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Kilcoyne's method to include a step of receiving video of the esophagus in order to provide autonomous video endoscopy while sensing physiological parameters (see Iddan, col. 1, lines 50-54).

7. Claims 41 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kilcoyne et al, US 6,285,897 B1, as applied to claim 38 above, and further in view of Gibson et al, US 5,557,596 A.

Claims 41 and 42: Kilcoyne teaches a memory chip 116 and does not teach the subject matter as claimed in regards to a specific memory storage device. However,

Art Unit: 3736

Gibson teaches a method of recording data using an ultra-high density storage device comprising: generating an electron beam current (using field emitter 102), bombarding a storage area 108 of the atomic resolution storage device 106 (storage medium) with the electron beam current to record data representative of the sensed biological condition, and positioning the storage area to be bombarded by the electron beam current (using micromover 110) (see fig. 1, col. 2, lines 10-30, and col. 3, lines 30-35). It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Kilcoyne's memory chip 116 with an ultra-high density storage device as taught by Gibson in order to provide increase storage density and provide fast times and high data rates (see Gibson, col. 1, lines 45-62).

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Navin Natnithithadha whose telephone number is (571) 272-4732. The examiner can normally be reached on Monday-Friday, 8:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Max Hindenburg can be reached on (571) 272-4726. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3736

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Navin Natnithithadha
Patent Examiner
GAU 3736
14 July 2005